

SPB over MPLS

draft-mack-crane-l2vpn-spb-o-mpls-00.txt

Ben Mack-Crane
Lucy Yong

ben.mackcrane@huawei.com
lucy.yong@huawei.com

About This Draft

- ⊕ Describe use cases for SPT sites interconnected by an IP/MPLS network to form one STP Region
 - ⊕ Point-to-Point PW
 - ⊕ PW mesh
- ⊕ Introduce a new Hierarchical L2VPN architecture with SPT Bridge and IP/MPLS
- ⊕ Informational draft

Shortest Path Bridging (SPB)

- ⊕ IEEE standard: 802.1aq
 - ⊞ Optimal pair-wise data frame forwarding with arbitrary topology
 - ⊞ Deterministic behavior
 - ⊞ Compatible with existing VLAN hardware implementations
- ⊕ SPB enabled device is called an SPT Bridge
 - ⊞ Because it computes Shortest Path Trees (SPTs)
- ⊕ SPBV (SPB – VID mode) provides SPB with no configuration for customer LANs (e.g., home or small office)
- ⊕ SPBM (SPB – MAC mode) provides a SPB backbone LAN for connected customer bridges or end stations (multi-tenant)
- ⊕ Project to support multipathing in progress (802.1Qbp)

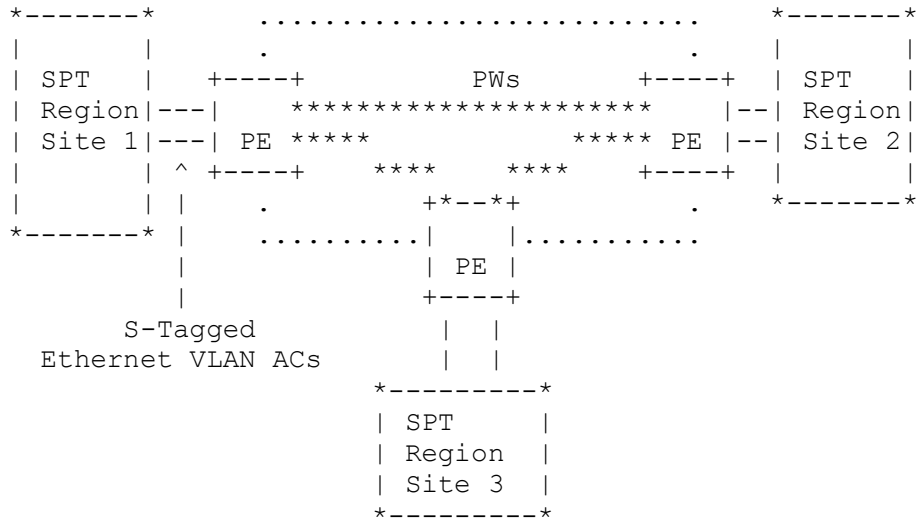
Use Cases

Point-to-Point Interconnection

- Use Ethernet or PPP encapsulated PW in IP/MPLS
- Use Ethernet or PPP mode on Bridge port at AC
- SPT Bridge and PE can be separate devices or one device

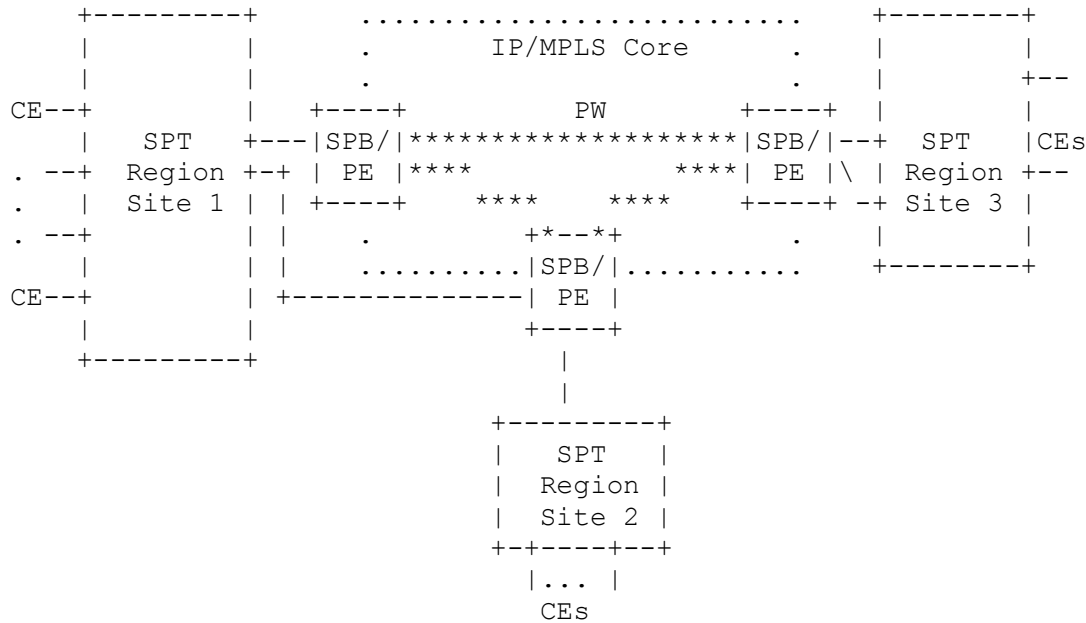
Multi-Site Interconnection

- Use PW mesh to interconnect SPT sites
- Can be full or partial mesh



Hierarchical L2VPN

- SPT Bridge at low-tier network
- IP/MPLS at top-tier network
- Very scalable solution for L2VPN



Acknowledgement

- ✦ Authors thank Donald Eastlake 3rd, Sue Hares, Sam Aldrin for their valuable contributions

Next Steps

- ⊕ Welcome the review and feedbacks
- ⊕ Proposal to add VPLS interconnection description